STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:	10/577, 893
Source:	IFW.P.
Date Processed by STIC:	05/11/2006
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THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER</u> <u>VERSION 4.4.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>, EFS Submission User Manual ePAVE)
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
- 3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05): U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/10/06



IFWP

DATE: 05/11/2006 RAW SEQUENCE LISTING PATENT APPLICATION: US/10/577,893 TIME: 11:07:16 Input Set : A:\21564Y SEQ 05 01 06.TXT Output Set: N:\CRF4\05112006\J577893.raw 4 <110> APPLICANT: Merck & Co., Inc. Istituto di Ricerche di Biologia Molecolare P. Angeletti S.p.A. 7 <120> TITLE OF INVENTION: HCV REPLICONS CONTAINING NS5B FROM GENOTYPE 2B 10 <130> FILE REFERENCE: 21564Y PCT C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/577,893 C--> 12 <141> CURRENT FILING DATE: 2006-05-01 12 <150> PRIOR APPLICATION NUMBER: 60/517,605 **Does Not Comply** 13 <151> PRIOR FILING DATE: 2003-11-05 Corrected Diskette Needed 15 <160> NUMBER OF SEQ ID NOS: 28 (pg1,2,6,7) 17 <170> SOFTWARE: FastSEQ for Windows Version 4.0 19 <210> SEQ ID NO: 1 20 <211> LENGTH: 591 21 <212> TYPE: PRT 22 <213> ORGANISM: Artificial Sequence 24 <220> FEATURE: 25 <223> OTHER INFORMATION: modified NS5B W--> 27 <221> NAME/KEY: VARIANT 28 <222> LOCATION: (5)...(5) 29 <223> OTHER INFORMATION: Xaa = threonine or serine ne or isoleucine
at this location
or leucine
at this location
at this location
The pro
392 W--> 31 <221> VARIANT 32 <222> LOCATION: (24) ... (24) 33 <223> OTHER INFORMATION: Xaa = asparagine or serine W--> 35 <221> VARIANT 36 <222> LOCATION: (31) ... (31) 37 <223> OTHER INFORMATION: Xaa = methionine or isoleucine W--> 39 <221> VARIANT 40 <222> LOCATION: ((376)...(376) 41 <223> OTHER INFORMATION: Xaa = isoleucine or leucine W--> 44 Ser Met Ser Tyr Xaa Trp Thr Gly Ala Leu Ile Thr Pro Cys Gly Pro 5 10 W--> 46 Glu Glu Lys Leu Pro Ile Xaa Pro Leu Ser Asn Ser Leu Xaa Arg 20 48 Phe His Asn Lys Val Tyr Ser Thr Thr Ser Arg Ser Ala Ser Leu Arg 45 35 50 Ala Lys Lys Val Thr Phe Asp Arg Val Gln Val Leu Asp Ala His Tyr 55 60 52 Asp Ser Val Leu Gln Asp Val Lys Arg Ala Ala Ser Lys Val Ser Ala

75

90

80

70

54 Arg Leu Leu Thr Val Glu Glu Ala Cys Ala Leu Thr Pro Pro His Ser

56 Ala Lys Ser Arg Tyr Gly Phe Gly Ala Lys Glu Val Arg Ser Leu Ser

W--> 43 < 400 > 1

1

50

45

47

49

51

55

53 65

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/577,893

DATE: 05/11/2006

TIME: 11:07:16

Input Set: A:\21564Y SEQ 05 01 06.TXT
Output Set: N:\CRF4\05112006\J577893.raw

58 Arg Arg Ala Val Asn His Ile Arg Ser Val Trp Glu Asp Leu Leu Glu 60 Asp Gln His Thr Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val 62 Phe Cys Ile Asp Pro Thr Lys Gly Gly Lys Lys Pro Ala Arg Leu Ile 63 145 64 Val Tyr Pro Asp Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu Tyr 66 Asp Ile Ala Gln Lys Leu Pro Lys Ala Ile Met Gly Pro Ser Tyr Gly 68 Phe Gln Tyr Ser Pro Ala Glu Arg Val Asp Phe Leu Leu Lys Ala Trp 70 Gly Ser Lys Lys Asp Pro Met Gly Phe Ser Tyr Asp Thr Arg Cys Phe 72 Asp Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile Tyr 73 225 74 Gln Ala Cys Ser Leu Pro Gln Glu Ala Arg Thr Val Ile His Ser Leu 76 Thr Glu Arg Leu Tyr Val Gly Gly Pro Met Thr Asn Ser Lys Gly Gln 78 Ser Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser 80 Met Gly Asn Thr Met Thr Cys Tyr Ile Lys Ala Leu Ala Ala Cys Lys 82 Ala Ala Gly Ile Val Asp Pro Val Met Leu Val Cys Gly Asp Asp Leu 84 Val Val Ile Ser Glu Ser Gln Gly Asn Glu Glu Asp Glu Arg Asn Leu 86 Arg Ala Phe Thr Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp 88 Leu Pro Arg Pro Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser 90 Asn Val Ser Val Ala Leu Asp Ser Arg Gly Arg Arg Arg Tyr Phe Leu <u> 380</u> W--> 92 Thr Arg Asp Pro Thr Thr Pro Xaa Thr Arg Ala Ala Trp Glu Thr Val 93 385 94 Arg His Ser Pro Val Asn Ser Trp Leu Gly Asn Ile Ile Gln Tyr Ala 96 Pro Thr Ile Trp Val Arg Met Val Ile Met Thr His Phe Phe Ser Ile 98 Leu Leu Ala Gln Asp Thr Leu Asn Gln Asn Leu Asn Phe Glu Met Tyr 100 Gly Ala Val Tyr Ser Val Asn Pro Leu Asp Leu Pro Ala Ile Ile Glu 102 Arg Leu His Gly Leu Glu Ala Phe Ser Leu His Thr Tyr Ser Pro His 103 465 104 Glu Leu Ser Arg Val Ala Ala Thr Leu Arg Lys Leu Gly Ala Pro Pro

DATE: 05/11/2006 RAW SEQUENCE LISTING PATENT APPLICATION: US/10/577,893 TIME: 11:07:16

Input Set : A:\21564Y SEQ 05 01 06.TXT

- Output Set: N:\CRF4\05112006\J577893.raw 106 Leu Arg Ala Trp Lys Ser Arg Ala Arg Ala Val Arg Ala Ser Leu Ile 107 510 500 505 108 Ala Gln Gly Ala Arg Ala Ala Ile Cys Gly Arg Tyr Leu Phe Asn Trp 520 525 109 515 110 Ala Val Lys Thr Lys Leu Lys Leu Thr Pro Leu Pro Glu Ala Ser Arg 111 530 535 540 112 Leu Asp Leu Ser Gly Trp Phe Thr Val Gly Ala Gly Gly Gly Asp Ile 560 113 545 550 555 114 Tyr His Ser Val Ser His Ala Arg Pro Arg Leu Leu Leu Cys Leu 565 570 115 116 Leu Leu Leu Ser Val Gly Val Gly Ile Phe Leu Leu Pro Asp Arg 117 580 585 590 120 <210> SEQ ID NO: 2 121 <211> LENGTH: 1776 122 <212> TYPE: DNA 123 <213> ORGANISM: Artificial Sequence 125 <220> FEATURE: 126 <223 > OTHER INFORMATION: modified NS5B W--> 128 <221> NAME/KEY: variation 129 <222> LOCATION: (3)...(3) 130 <223> OTHER INFORMATION: n = A or T W--> 132 <221> variation 133 <222> LOCATION: (9)...(9) 134 <223 > OTHER INFORMATION: n = C or A W--> 136 <221> variation 137 <222> LOCATION: (13)...(13) 138 <223 > OTHER INFORMATION: n = A or T W--> 140 <221> variation 141 <222> LOCATION: (15)...(15) 142 <223 > OTHER INFORMATION: n = A or C W--> 144 <221> variation 145 <222> LOCATION: (21)...(21) 146 <223> OTHER INFORMATION: n - A or G W--> 148 <221> variation 149 <222> LOCATION: (24)...(24) 150 <223 > OTHER INFORMATION: n = C or G W--> 152 <221> variation 153 <222> LOCATION: (28)...(28) 154 <223 > OTHER INFORMATION: n = T or C W--> 156 <221> modified base 157 <222> LOCATION: (30)...(30)
- W--> 164 <221> variation

W--> 160 <221> variation

165 <222> LOCATION: (71)...(71)

161 <222> LOCATION: (33)...(33)

166 <223 > OTHER INFORMATION: n = A or G

158 <223 > OTHER INFORMATION: n = G or C

162 <223> OTHER INFORMATION: n = C or A

W--> 168 <221> variation

DATE: 05/11/2006

TIME: 11:07:16

Input Set : A:\21564Y SEQ 05 01 06.TXT Output Set: N:\CRF4\05112006\J577893.raw 169 <222> LOCATION: (83)...(83) 170 <223 > OTHER INFORMATION: n = G or T W--> 172 <221> variation 173 <222> LOCATION: (1174)...(1174) 174 <223> OTHER INFORMATION: n = A or C W--> 176 < 400 > 2W--> 177 tcnatgtcnt acncntggac nggngccntn atnacaccat gtgggcccga agaggagaag 60 W--> 178 ttaccgatca nccctctgag taattcgctc atncggttcc ataataaggt gtactccaca 120 179 acctcgagga gtgcctctct gagggcaaag aaggtgactt ttgacagggt gcaggtgctg 180 180 gacgcacact atgactcagt cttgcaggac gttaagcggg ccgcctctaa ggttagtgcg 240 181 aggeteetea eggtagagga ageetgegeg etgaeeeege eecaeteege caaategega 300 182 tacggatttg gggcaaaaga ggtgcgcagc ttatctagga gggccgttaa ccacatccgg 360 183 tccgtgtggg aggacctcct ggaagaccaa cataccccaa ttgacacaac tatcatggct 420 184 aaaaatgagg tgttctgcat tgatccaact aaaggtggga aaaagccagc tcgcctcatc 480 185 gtataccccg accttggggt cagggtgtgc gaaaagatgg ccctctatga catcgcacaa 540 186 aagcttccca aagcgataat ggggccatcc tatgggttcc aatactctcc cgcagaacgg 600 187 gtcgatttcc tcctcaaagc ttggggaagt aagaaggacc caatggggtt ctcgtatgac 660 188 acccgctgct ttgactcaac cgtcacggag agggacataa gaacagaaga atccatatat 720 189 caggettgtt etetgeetea agaageeaga aetgteatae aetegeteae tgagagaett 780 190 tacgtaggag ggcccatgac aaacagcaaa gggcaatcct gcggctacag gcgttgccgc 840 191 gcaagcggtg ttttcaccac cagcatgggg aataccatga catgttacat caaagccctt 900 192 gcagcgtgta aggctgcagg gatcgtggac cctgttatgt tggtgtgtgg agacgacctg 960 193 gtcgtcatct cagagagcca aggtaacgag gaggacgagc gaaacctgag agctttcacg 1020 194 gaggctatga ccaggtattc cgccctccc ggtgaccttc ccagaccgga atatgacttg 1080 195 gagettataa eateetgete eteaaaegta teggtagege tggaeteteg gggtegeege 1140 W--> 196 cggtacttcc taaccagaga ccctaccact ccantcaccc gagctgcttg ggaaacagta 1200 197 agacactccc ctgtcaattc ttggctgggc aacatcatcc agtacgcccc cacaatctgg 1260 198 gtccggatgg tcataatgac tcacttcttc tccatactat tggcccagga cactctgaac 1320 199 caaaatctca attttgagat gtacggggca gtatactcgg tcaatccatt agacctaccg 1380 200 gccataattg aaaggctaca tgggcttgaa gccttttcac tgcacacata ctctccccac 1440 201 gaactctcac gggtggcagc aactctcaga aaacttggag cgcctcccct tagagcgtgg 1500 202 aagagtcggg cgcgtgccgt gagagcttca ctcatcgccc aaggagcgag ggcggccatt 1560 203 tgtggccgct acctcttcaa ctgggcggtg aaaacaaagc tcaaactcac tccattgccc 1620 204 gaggcgagcc gcctggattt atccgggtgg ttcaccgtgg gcgccggcgg gggcgacatt 1680 205 tatcacagcg tgtcgcatgc ccgaccccgc ctattactcc tttgcctact cctacttagc 1740 206 gtaggagtag gcatcttttt actccccgat cgatga 1776 208 <210> SEQ ID NO: 3 209 <211> LENGTH: 1394 210 <212> TYPE: PRT 211 <213> ORGANISM: Artificial Sequence 213 <220> FEATURE: 214 <223 > OTHER INFORMATION: modified NS3-5A W--> 216 <221> NAME/KEY: VARIANT 217 <222> LOCATION: (1215)...(1215) 218 <223> OTHER INFORMATION: Xaa = asparagine or serine W--> 220 <221> VARIANT

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/577,893

221 <222> LOCATION: (904)...(904)

W--> 224 < 400 > 3

222 <223> OTHER INFORMATION: Xaa = valine or alanine

RAW SEQUENCE LISTING DATE: 05/11/2006
PATENT APPLICATION: US/10/577,893 TIME: 11:07:16

Input Set: A:\21564Y SEQ 05 01 06.TXT
Output Set: N:\CRF4\05112006\J577893.raw

225 Met Ala Pro Ile Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu Gly 227 Cys Ile Ile Thr Ser Leu Thr Gly Arg Asp Lys Asn Gln Val Glu Gly 229 Glu Val Gln Val Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr Cys 231 Val Asn Gly Val Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys Thr 233 Leu Ala Gly Pro Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val Asp 235 Gln Asp Leu Val Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu Thr 237 Pro Cys Thr Cys Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His Ala 239 Asp Val Ile Pro Val Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu 241 Ser Pro Arg Pro Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu 243 Leu Cys Pro Ser Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys 244 145 245 Thr Arg Gly Val Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser Met 247 Glu Thr Thr Met Arg Ser Pro Val Phe Thr Asp Asn Ser Ser Pro Pro 249 Ala Val Pro Gln Thr Phe Gln Val Ala His Leu His Ala Pro Thr Gly 251 Ser Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala Ala Gln Gly Tyr 215 220 253 Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala Thr Leu Gly Phe Gly 254 225 255 Ala Tyr Met Ser Lys Ala His Gly Ile Asp Pro Asn Ile Arg Thr Gly 257 Val Arg Thr Ile Thr Thr Gly Ala Pro Val Thr Tyr Ser Thr Tyr Gly 259 Lys Phe Leu Ala Asp Gly Gly Cys Ser Gly Gly Ala Tyr Asp Ile Ile 261 Ile Cys Asp Glu Cys His Ser Thr Asp Ser Thr Thr Ile Leu Gly Ile 263 Gly Thr Val Leu Asp Gln Ala Glu Thr Ala Gly Ala Arg Leu Val Val 264 305 265 Leu Ala Thr Ala Thr Pro Pro Gly Ser Val Thr Val Pro His Pro Asn 267 Ile Glu Glu Val Ala Leu Ser Asn Thr Gly Glu Ile Pro Phe Tyr Gly 269 Lys Ala Ile Pro Ile Glu Ala Ile Arg Gly Gly Arg His Leu Ile Phe 271 Cys His Ser Lys Lys Lys Cys Asp Glu Leu Ala Ala Lys Leu Ser Gly 273 Leu Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Val Ser Val

<210> 24 <211> 19 <212> DNA (213> Artifial Sequence <400> 24 gtctaccgtg agcgaggaa

If L2137 Responses one Artificial or Unknesson. Pls Explains the Source of genetic Material. See Herr 11 on Error Sammany Sheet.

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<210> 27
<211> 783
<212> DNA
<213> modified NS4B
<400> 27

> 22137 Responses can only be Artificial, Unknown or Genus Species. See 9/em 10 on Error Summary Short.

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 05/11/2006
PATENT APPLICATION: US/10/577,893 TIME: 11:07:17

Input Set : A:\21564Y SEQ 05 01 06.TXT
Output Set: N:\CRF4\05112006\J577893.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 5,24,31,392 Seq#:2; N Pos. 3,9,13,15,21,24,28,30,33,71,93,1174

Seq#:3; Xaa Pos. 904,1215

Seq#:4; N Pos. 3644

Use of <220> Feature (NEW RULES):

Sequence(s) __are missing the <220> Feature and associated headings.

Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence" or "Unknown". Please explain source of genetic material in <220> to <223> section (See "Federal Register," 6/01/98, Vol. 63, No. 104,pp.29631-32) (Sec.1.823 of new Rules)

Seq#:1,2,3,4,24

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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/577,893

DATE: 05/11/2006
TIME: 11:07:17

Input Set : A:\21564Y SEQ 05 01 06.TXT
Output Set: N:\CRF4\05112006\J577893.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:27 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:31 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1 L:35 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1 L:39 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1 L:43 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1 L:44 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0 L:46 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:16 L:92 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:384 L:128 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:132 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2 L:136 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2 L:140 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2 L:144 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2 L:148 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2 L:152 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2 L:156 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2 L:160 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2 L:164 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2 L:168 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2 L:172 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2 L:176 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2 L:177 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0 L:178 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:60 L:196 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:1140 L:216 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:220 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3 L:224 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3 L:337 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:896 L:375 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:1200 L:411 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:415 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:4 L:419 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:4 L:480 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:3600 L:703 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:24 L:705 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:24, <213> ORGANISM: Artificial Sequence L:705 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:24, <213> ORGANISM: Artificial Sequence L:705 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:24,Line#:705